CLAIMS:

1. A method for storing information in DNA using a unique sequence of 4-DNA bases for representing each character of extended ASCII character set comprising:
   (a) producing a synthetic DNA molecule comprising encrypted digital information that can be decoded with the use of an encryption key, flanked on each side by a primer sequence; and
   (b) storing the DNA molecule in a storage DNA, which consists of a mixture of homogenous/heterogeneous DNA.
2. The method of claim 1 wherein the storage DNA is genomic DNA.
3. The method of claim 2 wherein the storage DNA is human DNA or any other organism's DNA.
4. The method of claim 1 wherein the storage DNA is synthetic.
5. The method of claim 1 wherein a software is provided to enable all 256 Extended ASCII characters to be defined in terms of DNA sequences.
6. The method of claim 1 wherein a minimum number of bases define each extended ASCII character.
7. The method of claim 1 wherein 4 sequences combinations result from one base A, T, G, C.
8. The method of claim 1 wherein with 2 bases 16 (4x4) different sequences are obtained.
9. The method of claim 1 wherein with three bases 64 (4x4x4) distinct sequences are obtained.
10. The method of claim 1 wherein with four bases 256 (4x4x4x4) distinct sequences are obtained.
11. The method of claim 1 wherein plain text/image or any digital information is encrypted in terms of DNA sequences using an encryption key software.
12. The method of claim 11 wherein the information is encrypted and fragmented in a number of segments if the information overflows the limits and cannot be synthesized in a single piece.
13. The method of claim 1 wherein synthesis of encrypted sequence(s) is carried out using DNA synthesizer.
14. The method of claim 1 wherein with a fixed number of different DNA primers sequence assigned a number, which resembles the segment position they represent.

15. The method of claim 1 wherein two tail primers are also provided, one of which resembles a continuation and other resembles termination segment.

16. The method of claim 1 wherein the DNA segment(s) is/are flanked by PCR primers at both ends with the header primers being attached at the beginning of segment and tail primers being attached at the end of the segment.

17. The method of claim 1 wherein SM DNA is mixed with complex denatured DNA strands of genomic DNA of human or other organism.

18. The method of claim 1 wherein a recipient knowing the sequences of both the primers [starting and tail] extracts the message, using PCR to isolate and amplify the encrypted DNA strand, followed by isolation and amplification of the DNA and sequencing using automated DNA sequencer, thereafter conversion of the DNA sequence obtained into digital message using encryption/decryption key.

19. A DNA molecule comprising an encrypted DNA sequence that can be decoded with the use of an encryption key, flanked on each side by polymerase chain reaction primer sequences wherein amplification of the DNA molecule and determination of the secret message DNA sequence and use of an encryption key, results in a decryption of the message.

20. A method as claimed in claim 1 where the method of encryption comprises:

a) encryption of a plain text/image or any digital information in terms of DNA sequences using encryption key, which first generates an array of 256 elements (unique 4-base per character), representing complete extended ASCII character set values;

b) encrypting of input information character-by-character using an array by matching the ASCII values of each character with the element number of the array;

c) fragmenting the encrypted sequence into a number of segments if the information overflows the limits and cannot be synthesized in a single DNA length;

d) flanking of the encrypted segment(s) on each side with header and tail primers;

e) synthesising of encrypted sequence(s) using DNA synthesizer;

f) mixing the synthesized DNA segment(s) with complex denatured DNA strands of genomic DNA of human or other organism;

g) transporting the encrypted DNA.

h) Decrypting the encrypting DNA at the recipient end.

21. A method as claimed in claim 20 where the method of decryption comprises:

a) Isolation and amplification of encrypted DNA using known primers flanked at each end by PCR method;

b) sequencing of the retrieved encrypted DNA using DNA sequencer;

c) interpreting the obtained sequence after integration of multi-segment, if required using a pre-determined encryption key;